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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,308	03/10/2004	Seela Raj D Rajaiah	70040140-1	4414

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AGILENT TECHNOLOGIES, INC.
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EXAMINER

DANIELS, ANTHONY J

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,308

Applicant(s)

RAJIAH ET AL.

Examiner

Anthony J. Daniels

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/09/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 12 (Figure 1). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because Reference Number "42" in Figure 3 refers to a color interpolation block, but in the Description of The Embodiment, [0016], Line 3, the Reference Number "42" refers to a color interpretation block. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US #5,504,525) in view of Takeuchi (US 2002/0054220 A1).

Claims 8-13 will be discussed first. As to claim 8, Suzuki shows a device that captures an image using a color filter array (see Figure 3, Reference Number "103"), that detects a plurality of color components using a color sensor (see Col. 4, Lines 33-41, or Figure 3, Reference Numbers "132R, 132G, 132B, and 131"), and that uses the values for each of the plurality of color components to calculate white balance using a calculator (see Figure 3, Reference Numbers, "130, 109, 110, 108A, and 108M"; Col.5, Lines 8-21). The claim differs from Suzuki in that it requires a converter that generates an average intensity value for each of the plurality of color components and requires that the average intensity value for each of the plurality of color components are to be used by a white balance calculator to calculate the white balance for the image captured by the color filter array.

In the same field of endeavor, Takeuchi teaches a device that detects a plurality of color components, that has an averaging processing unit that generates an average value for each of the plurality of color components (see [0055], Lines 5-7), and that has a white balance calculator that uses these values in calculation of white balance (see Figure 1, Reference Numbers "102-112"; [0065], Lines 1-7; [0071], Lines 1-9). In light of the teaching from Takeuchi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a converter that generates an average intensity value for the plurality of color components so to reduce error created by the processing unit (Suzuki, Reference Number "130", Figure 3) before A/D Conversion (Suzuki, see Figure 3, Reference Number "109"). The error in the plurality of color components generated by the aforementioned processing unit

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would combine with the error inherent in A/D Conversion; hence, an inaccurate digital value for the plurality of color components would be sent into the Control Unit (Suzuki, Reference Number "110", Figure 3). The converter that generates an average intensity value for each of the plurality of color components would, in turn average out any error created in said processing unit and prevent the propagation of error through the A/D converter.

As to claim 9, Suzuki, as modified by Takeuchi, teaches the device in claim 8 wherein each of the plurality of color components is an analog value; and, wherein each of the average intensity values is a digital value. (see Suzuki, Figure 3, Reference Numbers "132R, 132B, 132G"; *values for Rb, Gb, and Bb as seen in Figure 3 have yet to be processed by the A/D Converter {Ref. # 109, Fig. 3}; intuitively, the values have to be analog*) (see Takeuchi, [0055], Lines 5-7; [0053], Lines 1-3)

As to claim 10, Suzuki, as modified by Takeuchi, teaches the device in claim 8 is a digital camera (see Suzuki, Col. 1, Lines 5-8)

As to claim 11, Suzuki, as modified by Takeuchi, describes a device in claim 8, wherein the plurality of color components that include a red component, a green component, and a blue component (see Suzuki, Figure 3, Reference numbers "132R, 132G, 132B").

As to claim 12, Suzuki, as modified by Takeuchi, teaches the device in claim 8 wherein the plurality of color components include a red component, a green component, and a blue component; and, wherein the average intensity values include an average red intensity value derived from the red component, an average green

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component derived from a green component, and an average blue component derived from the blue component (see Takeuchi, [0053], 1-4; [0055], Lines 5-7).

As to claim 13, Suzuki, as modified by Takeuchi, teaches a device in claim 12 wherein the red component, the green component, and the blue component are analog values; and, wherein the average red intensity value, the average green intensity value, and the average blue intensity value are digital values (see Suzuki, Figure 1, Reference Numbers "432R, 432B, 432G"; *values for Rb, Gb, and Bb as seen in Figure 1 have yet to be processed by the A/D Converter {Ref. # 409, Fig. 1}; intuitively, the values have to be analog*) (see Takeuchi, [0053], Lines 1-4 ; [0055], Lines 5-7).

As to claims 1-6, 1-6 are method claims corresponding to the apparatus claims 8-13. Therefore, method claims 1-6 are analyzed and rejected as previously discussed with respect to apparatus claims 8-13.

As to claim 7, claim 7 describes a method as in claim 1 wherein capturing the image and detecting the plurality of color components are performed simultaneously allowing for parallel processing (see Suzuki, Figure 1).

As to claim 14, Suzuki, as modified by Takeuchi, teaches a device in claim 8 wherein the color sensor includes, for each color component, a photo sensor with an integrated filter (see Suzuki, Col. 4, Lines 37-41).

As to claim 15, the limitations claimed in claim 15 can be found in claim 8. Therefore, claim 15 is analyzed and rejected as previously discussed with respect to claim 8.

As to claim **16**, the limitations claimed in claim 16 can be found in claim 9.
Therefore, claim 16 is analyzed and rejected as previously discussed with respect to claim 9.

As to claim **17**, the limitations claimed in claim 17 can be found in claim 10.
Therefore, claim 17 is analyzed and rejected as previously discussed with respect to claim 10.

As to claim **18**, the limitations claimed in claim 18 can be found in claim 11.
Therefore, claim 18 is analyzed and rejected as previously discussed with respect to claim 11.

As to claim **19**, the limitations claimed in claim 19 can be found in claim 12.
Therefore, claim 19 is analyzed and rejected as previously discussed with respect to claim 12.

As to claim **20**, the limitations claimed in claim 20 can be found in claim 13.
Therefore, claim 20 is analyzed and rejected as previously discussed with respect to claim 13.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Daniels whose telephone number is (703) 305-4807. The examiner can normally be reached on 8:00 A.M. - 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andy Christensen can be reached on (703) 308-9644. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

09/28/2004



NGOC-YEN WU
PRIMARY EXAMINER